

***Remarks***

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1-8, 10-16, 25, 26, 31, and 32 are pending in the application, with claims 1, 31, and 32 being the independent claims. Claims 3 and 4 were amended to include the limitation that the nucleic acid be expressed in the dehiscence zone of a plant. Claim 4 was further amended to clarify the claim language. New claim 32 is sought to be added. Support for amended claims 3 and 4 can be found, *inter alia*, on page 4, lines 14-15, and support for new claim 32 can be found, *inter alia*, on page 4, lines 14-15 and page 8, lines 16-22. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

***Rejections under 35 U.S.C. § 112, first paragraph***

Claims 4 and 25 remain rejected under 35 U.S.C. § 112, first paragraph, as allegedly containing subject matter which was not described in the specification in such a way as to reasonably convey that the inventors had possession of the claimed invention at the time of filing. Applicants respectfully traverse this rejection.

Without acquiescing in the propriety of the rejection and solely in an effort to advance prosecution, Applicants have amended claim 4 to recite that the nucleic acid sequence of claim 1 is expressed in "the dehiscence zone of a plant." Therefore,

Applicants assert that the rejection has been rendered moot and respectfully request that the rejection be reconsidered and withdrawn.

In support of written description for the pending claims, the present application provides:

1) Literal description of the sequence of SEQ ID NO:14, which comprises structural features common to members of the encompassed genus (see, for example, Figure 2); and

2) Multiple specific examples (sequences) that would be encompassed by the genus (see Figures 5, 6, 9-11, and 15-17).

This information should be sufficient to overcome the rejection of pending claims 4 and 25 because it meets the requirements set forth in the Written Description Guidelines for adequate written description.

In further support of their argument for reconsideration of the rejection, Applicants assert that Example 3 demonstrates that the nucleic acid of SEQ ID NO:14 is responsible for the ability to detect and isolate an orthologous gene from *A. thaliana*. This orthologue has 80 to 85% identity to SEQ ID NO:14 and is specifically expressed in the pod (siliques), which is the zone of dehiscence. The homologues thus identified using the nucleic acid of SEQ ID NO:14 can also be used for the same utility as shown for SEQ ID NO:14.

As amended, claim 4, from which claim 25 depends, is supported by specification, because the specification teaches a nucleic acid molecule having the sequence disclosed in SEQ ID NO:14, or variants having 80% identity to SEQ ID NO:14, which are expressed in the dehiscence zone. The specification further discloses

processes that are essential to the operation of the claimed invention as a marker of the dehiscence zone. Since the nucleic acid is disclosed in the specification and methods to obtain variants of SEQ ID NO:14 are known in the art, one of ordinary skill in the art would be able to practice the claimed invention using the guidance supplied in the specification and obtain variants of SEQ ID NO:14 without undue experimentation. Therefore, the specification would demonstrate to one of skill in the art that Applicants had possession of the claimed invention as of the application's filing date and Applicants respectfully request that the rejection be reconsidered and withdrawn.

***Rejections under 35 U.S.C. § 112, second paragraph***

Claim 5 is rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Applicants respectfully traverse the rejection. Without acquiescing in the propriety of the rejection and solely in an effort to advance prosecution, Applicants have amended claim 5 to recite the sequence of SEQ ID NO:14. Therefore, Applicants assert that the rejection has been rendered moot and respectfully request that the rejection be reconsidered and withdrawn.

***Rejections under 35 U.S.C. § 101 and 35 U.S.C. § 112, first paragraph***

Claims 1-8, 10-16, and 25-26 remain rejected, and claim 31 is rejected under 35 U.S.C. § 101 because allegedly the claimed invention is not supported by either a specific and substantial asserted utility or a well established utility. Applicants respectfully traverse this rejection.

It is noted by the Examiner that the specification teaches that the DZ2 cDNA clone hybridizes to an mRNA transcript that is specifically expressed in the dehiscence zone, and that expression of the mRNA transcript is coincident with the dehiscence process (Office Action Paper No. 16, page 6). In addition to Applicants arguments regarding the utility of the invention which have been previously made of record concerning, for example, signal transduction function, and are incorporated herein by reference, Applicants assert that the claimed nucleic acid molecule may be used, *inter alia*, as a marker of the dehiscence zone and the dehiscence process within a plant. The claimed nucleic acid may be used not only as a probe, but also generally for the purpose of managing dehiscence. Plant dehiscence and the processes involved thereof are described, *inter alia*, on pages 1-2 of the specification. Therefore, not only is a utility described, but the specific target to be controlled is disclosed. M.P.E.P. 2107.01. Additionally, the use of the claimed nucleic acid as a control for dehiscence provides a substantial utility because plant dehiscence is a real-world agronomical problem and utilities that would be useful in the avoidance of seed loss are of great benefit. Applicants assert that both a specific and substantial utility are taught in the claimed invention as the claimed nucleic acid may be used not only as a probe, but also generally for the purpose of managing the agronomical problem of dehiscence, and respectfully request that the rejection be reconsidered and removed.

Claims 1-8, 10-16, and 25-26 remain rejected, and claim 31 is rejected, under 35 U.S.C. § 112, first paragraph, because since the claimed invention allegedly is not supported by either a specific asserted utility or a well established utility, one skilled in the art would not know how to use the claimed invention. Applicants respectfully

traverse this rejection and request that the rejection be reconsidered and removed for the reasons specified above.

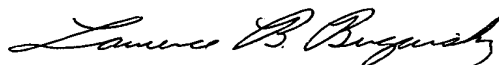
### ***Conclusion***

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Lawrence B. Bugaisky  
Attorney for Applicants  
Registration No. 35,086

Date: December 23, 2003

1100 New York Avenue, N.W.  
Washington, D.C. 20005-3934  
(202) 371-2600